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02/15/2006

~~10/023, 543~~

A.NA

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12/29/2005

01/30/2006

IN THE SPECIFICATION:

Please amend the abstract as follows.

A Viterbi decoder includes a number of classical Add-Compare-Select units and a number of further Add-Compare-Select unit having a lower complexity butterfly unit (300), having only two adder means, such that the further Add-Compare-Select unit has a butterfly unit (300) comprising: A method for producing metrics for use in the Viterbi decoder includes determining when a branch metric is zero and in response adding a first path metric and a branch metric to produce a first addition and adding a second path metric and the branch metric to produce a second addition. The second addition and the first path metric are compared to produce a first comparison, the first addition and the second path metric are compared to produce a second comparison. A selection is made between the second addition and the first path metric to produce a first survivor path in dependence on the first comparison and between the first addition and the second path metric to produce a second survivor path in dependence on the second comparison. first adder means (310) for receiving a first path metric and a branch metric and for producing at its output the addition thereof; and second adder means (320) for receiving a second path metric and said branch metric and for producing at its output the addition thereof. First comparator means (330) are coupled to receive the output of the second adder means and coupled to receive the first path metric for comparing therebetween. Second comparator means (340) are coupled to receive the output of the first adder means and coupled to receive the second path metric for comparing therebetween. First selection means (350) for selecting between the second adder means output and the first path metric produce a first survivor path metric in dependence on the first comparator means comparison. Second selection means (360) for selecting between the first adder means output and the second path metric signal produce a second survivor path metric in dependence on the second comparator means comparison. Only two adder means are used for processing metric transitions as a second branch metric is identified as having a value of zero.

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